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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/318,684	05/25/1999	ERIC C. HANNAH	INTL-0202-US	1769

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TIMOTHY N TROP  
TROP PRUNER HU & MILES PC  
8554 KATY FREEWAY  
SUITE 100  
HOUSTON, TX 77024

EXAMINER
STULBERGER, CAS P

ART UNIT	PAPER NUMBER
2132	12

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/318,684

Applicant(s)

HANNAH ET AL.

Examiner

Cas Stulberger

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is responsive to communications: application, filed 5/25/99; appeal brief filed 02/23/2004.
2. Claims 1-30 are pending in the case. Claims 1, 11, 22, and 29 are independent claims.

### ***Response to Arguments***

3. Applicant's arguments, see Appeal Brief, filed 02/23/2004, with respect to claims 1-30 have been fully considered and are persuasive. The rejection of 12/10/2003 has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-10, 22-24, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,650,831 to Farwell.
6. In regards to claims 1-3, 5-10, 22-24, and 28, Farwell discloses a home entertainment system (Farwell: Figure1). The antenna receives satellite signals (Farwell: column 7, lines 50-53). This meets the limitation of “a receiver, adapted to receive a digital television signal, in said first housing.” The antenna is connected to a personal computer (Farwell: Figure 1). This meets the limitation of “a housing including a plurality of slots, each slot including a plug adapted to removably receive a card; a bus electrically coupling said slots to one another; and each of said

plugs adapted to receive more than one type of serial bus interface.” The personal computer is connected to a monitor (Farwell: Figure 1; column 8, lines 61-65). This meets the limitation of “a digital television display in said second housing; and a digital graphics bus coupled to said receiver in said first housing and said display in said second housing.”

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 11- 21, 24-27, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,236,727 B1 to Ciacelli et al. and further in view of U.S. Patent No. 4,734,921 to Giangano et al.

In regards to claims 4, 11-13, 15, 20-21, 24-26, and 29, Ciacelli discloses encrypting a data stream to produce an encrypted data stream and means for transferring the encrypted data stream to a second structure of the computer system, the second structure being coupled to the CPU (Ciacelli: Figure 1; column 2, lines 10-18). This meets the limitation of “an encryption engine coupled to said bus to encrypt signals transferred from said receiver to said bus, said encryption engine.” Ciacelli also discloses that at the receiving module, the data can be decrypted for display (Ciacelli: Figure 1; column 2, lines 65-67). This meets the limitations of “a

decryption engine coupled to said bus to decrypt signals transferred from said bus to said display.” However Ciacelli does not disclose providing two different levels of encryption.

Giangano discloses a fully programmable linear feedback shift register “for encoding and encrypting information” (Giangano: column 1, lines 24-34). “The shift register utilizes a plurality of flip-flop stages. Each flip-flop stage is identical; and consequently, the shift register can be programmed for different lengths.” (Giangano: column 1, lines 34-43). This meets the limitation of “said encryption engine to provide two different levels of encryption.”

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Ciacelli with the method of providing different lengths of encryption as disclosed by Giangano in order to make the encryption more secure.

9. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,236,727 B1 to Ciacelli et al. in view of U.S. Patent No. 4,734,921 to Giangano et al. as applied to claims 4, 11-13, 15, 20-21, 24-26, and 29 above and further in view of U.S. Patent No 5,784,427 to Bennett et al.

However Ciacelli does not disclose using programmable tap registers. Bennett discloses a linear feedback shift register for storing the value of the feedback and shift unit. A tap register stores a tap position indicator indicative of tap positions for the feedback and shift unit (Bennett: Abstract). Bennett discloses a tap register and combinatorial logic (Bennett: Figure 3). Bennett also discloses a memory device in figure 11. This meets the limitations of “tap register, combinatorial logic, and tap memory; linear feedback shift registers.” An input sequence is

injected into the shift register from an input register (Bennett: Figure 3; column 4, lines 5-7).

This meets the limitation of “a combiner adapted to combine a seed signal together with feedback from said programmable tap register to create an input signal to said linear feedback shift register.” Bennett also discloses a majority mask register which identifies bits that must be logically combined (Bennett: column 5, lines 54-56). The corresponding bits of a shift register and a majority mask register are logically combined in an exclusive or logic block (Bennett: column 5, lines 66-67). This meets the limitation of “a high level of encryption.” The tap registers are programmable to allow the tap positions to be re-defined at any time (Bennett: column 5, lines 56-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Ciacelli with the linear feedback shift registers and tap registers as disclosed Bennett in order to reduce to a minimum the number of processing steps required in a processor, to achieve a particular operating function, such as a linear feedback shift or a stepping function used by encryption algorithms (Bennett: Abstract).

10. Claims 14, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,236,727 B1 to Ciacelli et al. in view of U.S. Patent No. 4,734,921 to Giangano et al. in view of U.S. Patent No 5,784,427 to Bennett et al. as applied to claims 16-19 above, and further in view of U.S. Patent No. 5,969,909 to Warren et al.

Ciacelli however does not disclose the encryption is changed on the frame boundaries.

Warren discloses that with encrypted frames of multi-media data, encryption keys may be carried in a key layer with the encrypted data signal or another data signal for use in decryption on a frame-by-frame basis (Warren: Abstract, last line; Figure 12). Warren also discloses that each frame can be scrambled with a different key, or the key can change every so many frames (Warren: column 14, lines 7-9)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the encryption method as disclosed in Ciacelli with the method of changing the key as disclosed in Warren in order to provide for electronic copy management of various forms of multi-media (Warren: column 1, lines 8-10).

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cas Stulberger whose telephone number is (703) 305-8034. The examiner can normally be reached on Monday - Friday, 9:00A.M. - 5:00P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2132

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CS

CS

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100